

We claim:

1. A composite article having large scale predictable dimensional stability comprising:

5 a. a metal foil backing having a back surface and an opposite front surface; and
 b. a layer of a radiation cured polymer having an exposed front surface bearing a three-dimensional microstructure of precisely shaped and located functional discontinuities including distal surface portions and adjacent depressed surface portions and an opposite surface in adherent contact with the front surface of said
10 backing.

2. The composite article of claim 1 wherein said metal foil backing comprises a metal selected from the group consisting of copper, aluminum, zinc, titanium, tin, iron, nickel, gold, silver, combinations thereof and alloys thereof.
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3. The composite article of claim 1 wherein said radiation cured polymer is a cured oligomeric resin.

4. The composite article of claim 1 wherein said radiation cured polymer is cured by
20 electron beam radiation and said metal foil backing is e-beam radiation transmissive.

5. The composite article of claim 1 wherein said radiation cured polymer is cured by actinic radiation.

25 6. The composite article of claim 1 wherein said radiation cured polymer is cured by thermal radiation.

7. The composite article of claim 1 wherein the depressed areas are wells which are shaped for receiving and holding complementarily shaped articles.
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8. The composite article of claim 7 in which the cavities are shaped to receive gyron spheres.
9. The composite article of claim 2 wherein the metal foil comprises a metal selected from the group consisting of copper and aluminum.
10. The composite article of claim 7 in which the cavities are shaped to receive conductive spheroids.
11. A composite article having large scale predictable dimensional stability comprising:
- a. a metal foil backing having a back surface and an opposite front surface; and
 - b. a layer of a radiation cured polymer having an exposed front surface bearing a three-dimensional microstructure of precisely shaped and located interactive functional discontinuities including distal surface portions and adjacent depressed surface portions and an opposite surface in adherent contact with the front surface of said backing.
12. The composite article of claim 11 wherein at least one portion of the polymer layer includes a distal surface portion distally spaced at least 0.05 mm from an adjacent depressed surface portion.
13. The composite article of claim 11 wherein said metal foil backing comprises a metal selected from the group consisting of copper, aluminum, zinc, titanium, tin, iron, nickel, gold, silver, combinations thereof and alloys thereof.
14. The composite article of claim 11 wherein said radiation cured polymer is a cured oligomeric resin.
15. The composite article of claim 11 wherein said radiation cured polymer is cured by electron beam radiation and said metal foil backing is e-beam radiation transmissive.

16. The composite article of claim 11 wherein said radiation cured polymer is cured by actinic radiation.
- 5 17. The composite article of claim 11 wherein said radiation cured polymer is cured by thermal radiation.
18. The composite article of claim 11 wherein the depressed areas are cavities which are shaped for receiving and holding complementarily shaped articles.
- 10 19. The composite article of claim 18 in which the cavities are shaped to receive gyrricon spheres.
20. The composite article of claim 13 wherein the metal foil comprises a metal
15 selected from the group consisting of copper and aluminum.
21. The composite article of claim 18 in which the cavities are shaped to receive conductive spheroids.
- 20 22. The composite article of claim 18 wherein the microstructure is shaped to provide an article which is useful as an etch mask.
23. The composite article of claim 1 having a dimensional change of less than about 100 ppm.
- 25 24. The composite article of claim 1 having a dimensional change of less than about 60 ppm.
25. The composite article of claim 11 having a dimensional change of less than about
30 100 ppm.

26. The composite article of claim 11 having a dimensional change of less than about 60 ppm.